

# 6V6GTA

## Beam Power Tube

With Heater Having Controlled Warm-Up Time

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC) . . . . .	6.3	volts
Current . . . . .	0.45 $\pm$ 6%	amp
Warm-up time (Average) . . . . .	11	sec

Direct Interelectrode Capacitances

(Approx.):<sup>a</sup>

Grid-No.1 to plate . . . . .	0.7	$\mu$ f
Grid-No.1 to cathode & grid No.3, grid No.2, and heater . . . . .	9	$\mu$ f
Plate to cathode & grid No.3, grid No.2, and heater . . . . .	7.5	$\mu$ f

#### Characteristics, Class A<sub>1</sub> Amplifier:

		Triode Connection <sup>b</sup>	
Plate Voltage . . . . .	250	250	volts
Grid-No.2 Voltage . . . . .	250	-	volts
Grid-No.1 Voltage . . . . .	-12.5	-12.5	volts
Amplification Factor . . . . .	-	9.8	
Plate Resistance (Approx.) . . . . .	50000	1960	ohms
Transconductance . . . . .	4100	5000	$\mu$ mhos
Plate Current . . . . .	45	49.5	ma
Grid-No.2 Current . . . . .	4.5	-	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.5 . . . . .	-	-36	volts

#### Mechanical:

Operating Position . . . . .	Any
Maximum Overall Length . . . . .	3-5/16"
Maximum Seated Length . . . . .	2-3/4"
Maximum Diameter . . . . .	1-9/32"
Dimensional Outline . . . . .	See <i>General Section</i>
Bulb . . . . .	T9

Bases (Alternates):

Intermediate-Shell Octal:

7-Pin, Arrangement 1, (JEDEC Group 1, No.B7-7)

6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-81)

Short Intermediate-Shell Octal with External Barriers:

7-Pin, (JEDEC Group 1, No.B7-59)

6-Pin, Arrangement 2, (JEDEC Group 1, No.B6-84)



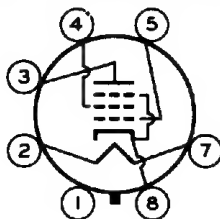
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Harrison, N. J.

DATA 1  
1-62

# 6V6GTA

Basing Designation for BOTTOM VIEW. . . . . 7AC

Pin 1<sup>c</sup>-No Connec-  
tion  
Pin 2-Heater  
Pin 3-Plate  
Pin 4-Grid No.2



Pin 5-Grid No.1  
Pin 7-Heater  
Pin 8-Cathode,  
Grid No.3

## AF POWER AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE . . . . .	350	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	315	max.	volts
GRID-No.2 INPUT . . . . .	2.2	max.	watts
PLATE DISSIPATION . . . . .	14	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . .	200	max.	volts
Heater positive with respect to cathode. . .	200 <sup>d</sup>	max.	volts

### Typical Operation and Characteristics:

Plate Voltage . . . . .	180	250	315	volts
Grid-No.2 Voltage . . . . .	180	250	225	volts
Grid-No.1 (Control-Grid) Voltage. . . . .	-8.5	-12.5	-13	volts
Peak AF Grid-No.1 Voltage . . . . .	8.5	12.5	13	volts
Zero-Signal Plate Current . . . . .	29	45	34	ma
Max.-Signal Plate Current . . . . .	30	47	35	ma
Zero-Signal Grid-No.2 Current . . . . .	3	4.5	2.2	ma
Max.-Signal Grid-No.2 Current . . . . .	4	7	6	ma
Plate Resistance (Approx.). . . . .	50000	50000	80000	ohms
Transconductance. . . . .	3700	4100	3750	μmhos
Load Resistance . . . . .	3500	5000	8500	ohms
Total Harmonic Distortion . . . . .	8	8	12	%
Max.-Signal Power Output. . . . .	2	4.5	5.5	watts

### Maximum Circuit Values:

Grid-No.1-Circuit Resistance:			
For fixed-bias operation. . . . .	0.1	max.	megohm
For cathode-bias operation. . . . .	0.5	max.	megohm

## PUSH-PULL AF POWER AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Maximum Values:

PLATE VOLTAGE . . . . .	350	max.	volts
GRID-No.2 (SCREEN-GRID) VOLTAGE . . . . .	315	max.	volts
GRID-No.2 INPUT . . . . .	2.2	max.	watts
PLATE DISSIPATION . . . . .	14	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . .	200	max.	volts
Heater positive with respect to cathode. . .	200 <sup>d</sup>	max.	volts



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## Typical Operation and Characteristics:

*Values are for two tubes*

Plate Voltage . . . . .	250	285	volts
Grid-No.2 Voltage . . . . .	250	285	volts
Grid-No.1 (Control-Grid) Voltage. . . . .	-15	-19	volts
Peak AF Grid-No.1-to-Grid-No.1 Voltage . . . . .	30	38	volts
Zero-Signal Plate Current . . . . .	70	70	ma
Max.-Signal Plate Current . . . . .	79	92	ma
Zero-Signal Grid-No.2 Current . . . . .	5	4	ma
Max.-Signal Grid-No.2 Current . . . . .	13	13.5	ma
Effective Load Resistance (Plate to plate). . . . .	10000	8000	ohms
Total Harmonic Distortion . . . . .	5	3.5	%
Maximum-Signal Power Output . . . . .	10	14	watts

## Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For fixed-bias operation. . . . .	0.1 max.	megohm
For cathode-bias operation. . . . .	0.5 max.	megohm

## VERTICAL-DEFLECTION AMPLIFIER

*Triode Connection — Grid No.2 Connected to Plate*

## Maximum Ratings, Design-Maximum Values:

*For operation in a 525-line, 30-frame system<sup>a</sup>*

DC PLATE VOLTAGE. . . . .	350	max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE <sup>f</sup> . . . . .	1200	max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 (CONTROL-GRID) VOLTAGE. . . . .	275	max.	volts
CATHODE CURRENT:			
Peak. . . . .	115	max.	ma
Average . . . . .	40	max.	ma
PLATE DISSIPATION . . . . .	10	max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . . . .	200	max.	volts
Heater positive with respect to cathode. . . . .	200 <sup>d</sup>	max.	volts

## Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For cathode-bias operation. . . . .	2.2 max.	megohms

<sup>a</sup> Without external shield.

<sup>b</sup> Grid No.2 connected to plate.

<sup>c</sup> On the 6-pin bases, pin 1 as well as pin 6 is omitted.

<sup>d</sup> The dc component must not exceed 100 volts.

<sup>e</sup> As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations," Federal Communications Commission.

<sup>f</sup> This rating is applicable when the duration of the voltage pulse does not exceed 15 per cent of one vertical scanning cycle. In a 525-line, 30-frame system, 15 per cent of one vertical scanning cycle is 2.5 milliseconds.



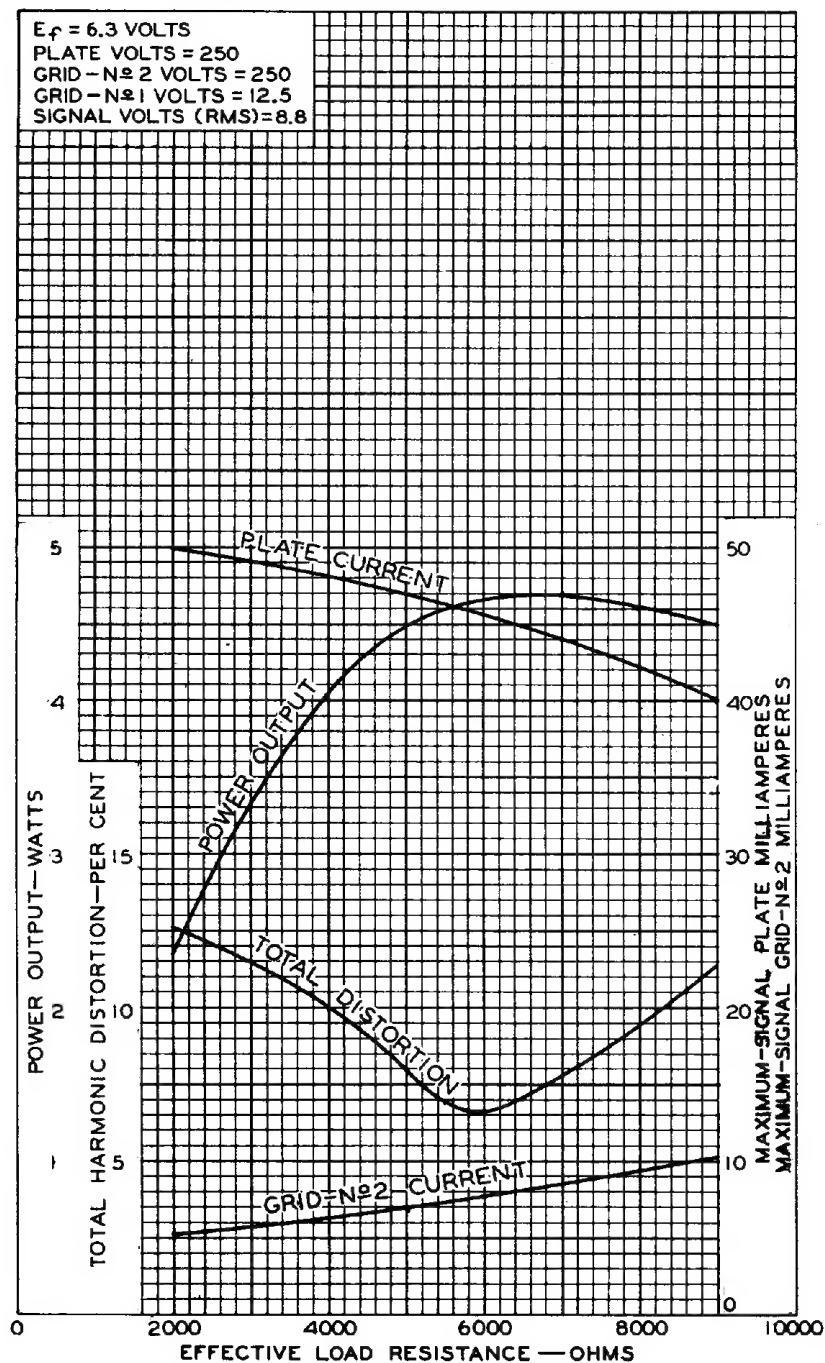
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## OPERATION CHARACTERISTICS



92CM-6339R2



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